



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,213	07/18/2005	Masaru Fukuoka	L9289.05103	6402
24257	7590	06/02/2008		
STEVENS DAVIS LLP 1615 L STREET NW SUITE 850 WASHINGTON, DC 20036			EXAMINER TRAN, TUAN A	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 06/02/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,213

Applicant(s)

FUKUOKA ET AL.

Examiner

TUAN A. TRAN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 4 is objected to because of the following informalities: the phrase "a level of spreading of the multipath based on the received signal" should be changed to "a level of spreading of multipath based on a received signal" and the phrase "determining a level of the correlation between adjacent subcarrier waves" should be changed to "determining a level of correlation between adjacent subcarrier waves", for consistency. Appropriate correction is required.

Claim 5 is objected to because of the following informalities: the phrase "the received signal" should be changed to "a received signal", the phrase "the value obtained by in-phase adding the correlated value" should be changed to "value obtained by in-phase adding correlated values" and the phrase "employed as a correlated value" should be changed to "employed as the correlated value", for consistency. Appropriate correction is required.

Claim 6 is objected to because of the following informalities: the phrase "wherein said first multiplying means has a predetermined coefficient" should be changed to "wherein said first multiplying means has the predetermined coefficient" for consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 3 and 5-6, limitation "known signal", recited in claims, fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In a telecommunication system utilized multi-carrier protocol such as MC-CDMA or OFDM, "known signal" can be control signals (i.e. broadcast control signal, synchronization signal, power command signal, pilot signal ..., etc) or traffic signals (i.e. voice uplink/downlink signals, data uplink/downlink signals ..., etc). Correction is required. For the purpose of examination, the examiner will considers, in accordance with the applicant's specification, limitation "known signal" as "pilot signal".

Claims 2 and 4 are rejected for being dependent upon independent claim 1 that has been rejected.

Allowable Subject Matter

2. Claims 1-6 would be allowable if rewritten or amended to overcome the objection(s) and the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior to the claimed subject matters is the applicant's admitted prior art (See specification, figures 2-3 and page 4 line 25 to page 8 line 24). The applicant's admitted prior art discloses every limitations recited in independent claims 1 or 6 except

Art Unit: 2618

calculation error of the noise power generated by difference of channel variation between subcarrier waves is corrected for multiple times as recited in claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- USPAT (7,046,963; 7,010,017; 7,072,381; 6,879,577; 7,099,270; 5,572,552; 6,542,483).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN A. TRAN whose telephone number is (571)272-7858. The examiner can normally be reached on Mon-Fri, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan A Tran/
Primary Examiner, Art Unit 2618